

RECORD OF
COMMUNICATION

☐ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO: Litton ACD
File

FROM: Karen
Flournoy

DATE

TIME

SUBJECT

Litton ACD Closure Plan

SUMMARY OF COMMUNICATION

On 8-6-82 I discussed w/ Katie Biggs, SPFD, the latest Litton Closure Plan (8-4-82) wrt soil contamination. Katie raised the following concerns:

1. Will soil used for cap be uncontaminated?
2. We usually recommend cap of 2' clay compacted to 95% Proctor.
3. Concerned about use of berm material for fill.
4. What about combined material if put berm on top of the other soil?

I called Paul Meiburger, MDNR, on 8-6 & we discussed these comments. MDNR is working w/ Litton on the issue of a clay cap. We will send out an approval letter with some conditions.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

I called Paul on 8-19 & ask him about status of Litton closure. Paul has not heard what they plan to do - the lagoon is full of water has water in it now - due to recent heavy rains.

Karen Flournoy
8-20-82



R00337338

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TO:

Subpart G - Closure and Post-Closure

265.111 Closure and Post-Closure

A. Owner shall close facility in a manner to minimize all hazards.

265.112 Closure Plan

- A. In March, 1982, the city sewer system was available for hookup and Litton began its use for effluent discharge. At that time, Litton discontinued discharging effluent waters to "A" pond. Due to the DNR Eminent Hazardous Action of March, 1982, the waste water in "A" pond was removed. Closure is expected to begin between August 1st and 15th, 1982.
- B. Enclosed are analysis by independent testing labs of our sludge. The samples were approximately one liter in size and taken as representative grab samples. The samples were taken at the North East and South West corners of our lagoon. All samples were collected in inert, clean containers. Also included, are our analysis of sludge samples taken by Mr. Paul Meiburger of the DNR on July 29, 1982. The analysis was performed by our lab for comparison with the state laboratory.
- C. Based on calculations enclosed, approximately 1800 yd³ of sludge will have accumulated. Our contractor, National Industrial Environmental Service (NIES) will remove, transport, and dispose of the sludge in a safe and timely manner. The disposal site will be Joliet, Illinois. Appropriate Illinois permits are currently being reviewed by the state of Illinois.
- D. Advanced Circuitry proposes to remove the limestone and/or soil beneath the sludge to a depth where the levels of chrome, nickel, and total lead meet the levels specified below. The maximum allowable metal levels, in the residual soil, are:

Lead (TEP)	1.5 ppm
Total Lead (Digestion)	1.5 ppm
Chromium (TEP)	1.5 ppm
Nickel (TEP)	4.0 ppm

or, sampling at a depth of 12" below the surface to insure that significant decreases (an order of magnitude) with depth are not occurring, so long as the uppermost residual soil metal content does not exceed:

Lead (TEP)	2.5 ppm
Total Lead (Digestion)	2.5 ppm
Chromium (TEP)	2.5 ppm
Nickel (TEP)	10 ppm

After the sludge is removed, surface samples will be taken at locations shown in the attached sketch. All samples will be at least one liter in volume and will include the top 3 inches of soil. This sample will then be divided into 2 samples and marked identically. The first sample will be given to the DNR representative on hand during our closure. The second sample will be tested in our laboratory for the above metals. Advanced Circuitry will test for chromium, lead, and nickel per EP Toxicity Test Procedure revised by 46FR35247, July 7, 1981, and test for total lead per EPA Manual Section 4.1.3, EPA #600/4-79-020 "Method For Chemical Analysis For Water And Waste". The Atomic Absorption unit at Advanced Circuitry is capable of measuring concentrations down to .01 ppm of lead, .002 ppm of chromium, and .01 ppm of nickel.

*Dwlin
382-4838*

*Katie -
Please
look at
this section.
Deb suggested
4"-6" depth of samples
if l.t. established levels
ok - no further samples
at greater depth are
needed. If above
established levels
need to sample 1 1/2-2
ft. at 4-6" intervals &
check levels of
contamination.*

It is expected that our laboratory will run quality assurance samples, provided by the DNR, on a daily basis.

The flow diagram for sampling process is as follows:

- ① Surface sample taken and analyzed:
 - a) If all metal level values are below table 1, then the general area of sample is suitable for closure.
 - b) If any metal level value is above table 1, but below table 2, then go to ②.
 - c) If any metal level value is above table 2, then go to ③.
- ② Take soil sample 12" beneath surface and analyze for metal that failed in ①:
 - a) If metal level is greater than .1 times the surface value, then the general area is suitable for closure.
 - b) If metal level is less than .1 times the surface value, then the additional amount of soil and/or limestone to be removed from the surface will be determined by the formula:
- ③ Take soil sample 12" beneath surface and analyze for metal that failed in ①.
 - a) If metal level is greater than .1 times the surface value, then the general area is suitable for closure.
 - b) If the metal level is less than .1 times the surface value, then the additional amount of soil and/or limestone to be removed will be determined by the formula:

$$\frac{\text{Surface Metal Level}}{\text{Table 1 Metal Level}} = \frac{\text{Depth to be Removed}}{12''}$$

$$\frac{\text{Surface Metal Level}}{\text{Table 2 Metal Level}} = \frac{\text{Depth to be Removed}}{12''}$$

Table 1

Total Chromium or Chrome VI (TEP)	1.5 mg/l
Nickel (TEP)	4.0 mg/l
Total Lead (Digestion)	1.5 mg/l
Lead (TEP)	1.5 mg/l

Table 2

Total Chromium or Chrome VI (TEP)	2.5 mg/l
Nickel (TEP)	10.0 mg/l
Total Lead (Digestion)	2.5 mg/l
Lead (TEP)	2.5 mg/l

Before any area can be "closed", the registered professional engineer must sign the analysis to show his concurrence with the results. Once the engineer concurs, the area will be backfilled with approximately 2" of dirt. The final dirt depth will be determined after all areas have been found suitable for closure. At that time, a topographic survey will be conducted on site to assure good drainage.

What characteristics

Any accumulation of sludge will be stored within the confines of "A" pond. The only need of accumulation is due to scheduling delays between shipments of our sludge. No sludge will be stored for longer than 90 days.

- F. Prior to closure starting, the Springfield office of the Missouri Department of Natural Resources will be given five days notice. Actual closure will start between August 1st and August 15, 1982, and will take approximately 8 days. Final closure will consist of grading over and seeding of the site.
- G. During closure operations, the DNR representative must be on site at all times due to our expected operating procedure. We plan to remove the sludge, sample, and cover the cleared area as we work our way across the pond.
- H. In the unlikely event a sinkhole develops within the confines of "A" pond, the following procedure is recommended:
 - 1) Remove as much sludge and soil from the sinkhole as possible.
 - 2) Fill the sinkhole with large, coarse rocks and mound with smaller rocks to aid drainage.

The above were recommended by State Geologist J. VanDyke and T. Dean on March 18, 1982.

265.113 Time Allowed for Closure

- A. Closure is to take place within 180 days of last receipt of wastes.
- B. We may apply to Regional Administrator for longer closure time.

265.114 Disposal or Decontamination of Equipment

- A. All the equipment and structures used in the closure shall be properly disposed of, or decontaminated by high pressure water spray applied within the confines of "A" pond. This is to be done by NIES.

265.115 Certification of Closure

- A. Upon closure, Litton shall submit to the Regional Director certification thereof, signed by the operator and an independent professional registered engineer. The engineering firm of Hood-Rich has been contracted to oversee our operation. The engineer of Hood-Rich, Mr. Paul Hickman, feels that a daily inspection of between one and two hours should adequately enable him to properly evaluate our closure operation.
- B. Litton will make every effort to comply with the September 15, 1982, closure and certification date.

265.142 Closure Cost

- A. Based on current estimates, the cost to close our waste water lagoon is approximately \$180,000.

Mr. David Edwards
Facilities Manager
Litton Advanced Circuitry
P.O. Box 2847
Commercial Station
Springfield, Mo. 65803

Dear Mr. Edwards

We have reviewed the revised closure plan submitted to the Missouri Department of Natural Resources on June 30, 1982. The following comments should be included in a revised closure plan.

1. The revised closure plan should address the soil sampling and removal process in more detail as described below:
 - A. Proposed locations of soil borings and type of analyses. Based upon information contained in our file it would appear that the soil analyses should include the following.

Call Edwards
soil notice
Pub notice
closure clg -

CLOSURE POST-CLOSURE NEW STRATEGY

CHANGE IN STATUS AT INTERIM STATUS FACILITIES

Listed below are a number of examples of changes in status at interim status facilities and how closure requirements would be implemented in these situations.

~~1. Change in Process. When a facility changes process and hazardous waste is no longer produced the following closure requirements~~

1. Change in Process: When a facility changes process and hazardous waste is no longer produced.

Closure Requirements: Closure plan including removal of waste, decontamination of equipment (drums, tanks, etc.) PE certification and public notice. (Question arises as to whether the facility ever handled hazardous waste.)

2. Change from Storage Facility to Generator: ~~For~~ Drum or tank storage facilities previously storing hazardous waste for greater than 90 days change to generator status storing hazardous waste for less than 90 days.

Closure Requirements: Letter from facility indicating that all old waste has been removed from site.